



Department of Energy

Washington, DC 20585

The potential impact of rising greenhouse gases in the atmosphere will be a global concern well into the 21st century and perhaps beyond. The Department of Energy already has extensive energy research and development programs that will result in less carbon-intensive and more energy-efficient methods of generating energy in the future. These two programs, although initially started for other reasons, will help reduce the emissions of those greenhouse gases.

A third program, carbon sequestration, now offers the potential to further reduce the buildup in atmospheric concentrations of greenhouse gases. Although there are a few pioneering scientists who have been conducting research in carbon sequestration for many years, this field is relatively new. The field is remarkably broad-based both in the ideas for potential sequestration options and in the science spread across many different disciplines. Structuring a research program that makes sense of the options and allocates resources in high-priority topics will be a challenge.

This Carbon Sequestration Research and Development Report is an important step in our goal to implement the research program in an organized, coordinated, and thoughtful manner. More than 70 scientists came together to help write the report and more than 200 experts from around the world gathered at a September 1999 workshop to suggest research priorities, share their own experiences, and form collaborations. We want to thank each of them. The proceedings of this workshop are provided in Chapter 9.

We also want to encourage those scientists who are participating in the actual research. Some of these carbon sequestration options may be impractical for economic, environmental, or other reasons. That will be critically important information. New discoveries will also uncover new options. We believe that carbon sequestration holds great potential to reduce greenhouse gas accumulation at costs and impacts that will prove to be affordable and acceptable. We intend to continue the dialog with the public, industry, academia, the environmental community, and international organizations that has begun on this important research topic. We critically need research and development on carbon sequestration to turn scientific potential into pragmatic reality.

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